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SCROPHULARIACEAE OF THE LOCAL FLORA. II

BY FRANCIS W. PENNELL

Continued from June TORREYA

5. LIMOSELLA L. Sp. Pl. 631. 1753.

Type species, *L. aquatica* L., of Europe.

- ✓ 1. LIMOSELLA SUBULATA Ives in Trans. Phys. Med. Soc. N. Y. 1: 440. 1817. "First observed in 1816. . . It flourishes in great abundance in the Housatonic, and in most of the rivers which empty into Long Island Sound, within the range of the tide."

Ygramela (or *Limosella*) *maritima* Raf. Atl. Journ. 199. 1833. "Discovered this year in the wet sand of the sea islands of New Jersey." As a new genus, this was based upon specimens the flowers of which bore but two stamens. Certainly an abnormal form, as the plant of such situations has normally four stamens.

Flowering from late August to November, and soon ripening fruit.

Tide-water river-beaches, saline, brackish or fresh, and about borders of ponds, brackish or fresh, along the coast. Margins of ponds back of sand-dunes, growing inundated or somewhat emersed on the sandy coastward margin of these, Long Island and southward to Ocean County, New Jersey; on the sandy or gravelly flats between high and low tide, along the Housatonic, Hudson, Passaic, Delaware, and doubtless other rivers. The plants of the two environments differ slightly, as has been indicated in *Torreya* 19: 51. 1919. This species ranges from Labrador to Maryland.

[No. 7, Vol. 19 of *TORREYA*, comprising pp. 125-142, was issued Sept. 10, 1919]

6. GRATIOLA L. Sp. Pl. 17. 1753.

Type species, *G. officinalis* L., of Europe.

Corolla slightly exceeding calyx, externally glabrous.

Capsule nearly pyramidal, acuminate. Pedicels very short. Stem pubescent with several-celled hairs. (*Pilosae*.)1. *G. pilosa*

Corolla more than twice as long as the calyx, externally more or less puberulent. Capsule broader, acute to rounded.

Pedicels longer. Stem glabrous or puberulent with one-celled hairs, these frequently gland-bearing.

Pedicels exceeding 10 mm. in length. Corolla within throat on posterior side densely pubescent with knobbed hairs. Capsule ovate, equaled or exceeded by the sepals. Seeds 3-5 mm. long, semi-globose to oblong.

Capsule 1-3 mm. long, exceeded by the sepals.

Stem-leaves clasping by a broad base, usually at least the upper with resinous dots. Roots perennial, slender. Stoloniferous. (*Ramosae*.)

Corolla golden-yellow throughout. Capsule 3 mm. long, little exceeded by the sepals.

Leaves lanceolate to nearly ovate, entire or distally obscurely denticulate, with blackish glandular dots.

Leaves linear to lanceolate, frequently denticulate distally, usually strongly puncticulate.

Sepals obtusish to acute.

2. *G. aurea*.

Leaves lanceolate to nearly ovate, entire, obscurely puncticulate distally. Sepals very obtuse.

2a. *G. aurea obtusa*.

Corolla with throat dull-yellow, the lobes white.

Capsule 2 mm. long, much exceeded by the sepals. Leaves ovate, serrate, the upper sometimes with sparse glandular dots.

3. *G. viscidula*.

Capsule 4-5 mm. long, about equaled by the sepals.

Stem-leaves narrowed to a sessile or slightly clasping base, not resinous-dotted. Roots annual, the main root thick and giving off numerous fibers.

Not stoloniferous. (*Neglectae*.)4. *G. neglecta*.Pedicels less than 5 mm. in length. Corolla within throat on posterior side pubescent with knobless hairs. Capsule globose, 5-6 mm. long, slightly exceeding the sepals. Seeds 7 mm. long, linear. Leaves and root as in *Neglectae*. (*Virginianae*.)5. *G. virginiana*.

1. GRATIOLA PILOSA Michx. Fl. Bor. Am. 1: 7. 1803. "Hab. in Carolinae inferioris uliginosis." Description sufficiently distinctive.

Sophronanthe pilosa (Michx.) Small, Fl. S.E. Un. St. 1067, 1338. 1903.

Flowering mid-July to late September, and soon ripening fruit.

Moist sandy pineland, in potassic soil, Cape May District and locally in Camden County in the Middle District, of the Coastal Plain of southern New Jersey. Ranges from New Jersey to Florida and eastern Texas, in the Coastal Plain.

2. *GRATIOLA AUREA* Pursh, Fl. Am. Sept. 1: 12. 1814. "In sandy wet places, in the pine-barrens of New England, New Jersey and Carolina . . . v. v.; v. s. in Herbario Banksiano." Description distinctive, here restricted to the northern first-mentioned plant.

Flowering from early June to late September, and soon ripening fruit. Apparently fruit is sparingly matured, the plant increasing mainly by stolons.

Wet sandy potassic soil, margins of ponds; frequent in the Coastal Plain of Long Island and New Jersey, especially in the Pine Barrens; occasional about lakes in the glaciated region above the Fall-line, at least at Lake Hopatcong, Morris Co., New Jersey. Ranges from Maine and eastern Ontario to Virginia.

2a. *Gratiola aurea obtusa* Pennell, var. nov.

Plant erect, 1.5 dm. tall. Leaves lanceolate to ovate, 1.5 cm. long, entire, obscurely punctulate distally. Sepals 3 mm. long, very obtuse. Corolla 10-12 mm. long.

Type, gravelly shores of Delaware River, between high and low tide, Fish House, Camden Co., New Jersey, collected in flower by Stewardson Brown; in herb. Academy of Natural Sciences of Philadelphia.

Gravelly or sandy shores of Delaware River, between tides, Mercer and Camden counties, New Jersey, and Philadelphia Co., Pennsylvania.

3. *Gratiola viscidula* Pennell, nom. nov.

Gratiola viscosa Schwein.; Le Conte in Ann. Lyc. N. Y. 1: 106. 1824. "Inhabits Virginia, and the upper parts of North Carolina." Apparently the plant now considered, although the description appears inaccurate in stating

that the capsule is as long as the sepals. Not *G. viscosa* Hornem. Enum. Pl. Hort. Hafn. 19. 1807.

Flowering from mid-July to September, and soon ripening fruit.

Swales and swamps, along streams, in potassic soil, at a few stations in the Piedmont of northern Delaware. Ranges from Delaware to upland Georgia and eastern Tennessee.

4. *GRATIOLA NEGLECTA* Torr. Cat. Pl. N. Y. 89. 1819. "Within thirty miles of the City of New York." In the herbarium of Columbia University are two sheets, probably representing but one collection, both labeled "*Gratiola virginica* Linn., Torr. Fl. N. Y., 2, p. 37." It is possible that one or both of these are Torrey's plants of *G. neglecta*. The latter was described as distinct from *G. virginiana* because of the lack of the rudimentary antero-lateral filaments. Five years later, in his Flora of the Northern States, Torrey was persuaded that this lack was true of *G. virginiana*, and on that account reduced his earlier species. Still later, in 1843, in his Flora of New York, he described such rudiments as present, and held as erroneous his previous observations. The truth, as confirmed by an extensive examination of fresh flowers, is that these rudiments may be small, or reduced to one, or altogether absent; all stages are to be found in the same colony. The name is here used for the species which has long been known as *G. virginiana*.

Conobea borealis Spreng. in Neue Entdeck. 3: 26. 1822. "Hab. in locis humidis prope Noveboracum. . . ." This is virtually a re-description of *Gratiola neglecta* Torr., although sufficient new matter is added to indicate that Sprengel must have seen a specimen of this. The change of generic classification is doubtless due to the discovery of sterile rudiments of the antero-lateral filaments.

Flowering from late May to late September, and soon ripening fruit.

Wet loam, woodland or open, in potassic soil, common above the Fall-line; and through the Middle District of the Coastal

Plain. Ranges from Maine and Quebec to British Columbia, southward to Georgia, Texas and California.

5. *GRATIOLA VIRGINIANA* L. Sp. Pl. 17. 1753. "Habitat in Virginia." Although Linné had specimens of the plants here called *G. neglecta* in his herbarium in 1753, his description is taken solely from Gron. Fl. Virg. 6, 1743, and so is based upon *Clayton* 379. This, as shown by Dr. S. F. Blake in *Rhodora* 20:65, 1918, is the plant which has been known as *G. sphaerocarpa* Ell.

Flowering from mid-May to September, and soon ripening fruit.

Wet loam, in shade, occasional in the Middle and Cape May Districts of the Coastal Plain of New Jersey, and below the Fall-line in Delaware. From Burlington, N. J. southward to Florida and Texas, extending inland to the southern Appalachians.

7. *MIMULUS* L. Sp. Pl. 634. 1753

Type species, *M. ringens* L.

Corolla yellow. Capsule dehiscent laterally, apex persistent and valves permanently attached to axial cell-wall. Seeds ellipsoid-orbicular. Stems pubescent. Species introduced.

(*Simiolus* Greene.)

Corolla 12-20 mm. long. Leaves 3-4 cm. long. Stems loosely lanose, slender, lax.

1. *M. moschatus*

Corolla 30-35 mm. long. Leaves 4-5 cm. long. Stems glabrous to finely glandular-pubescent, stout, erect.

2. *M. gullatus*.

Corolla lavender-violet. Capsule dehiscent laterally from very apex, and its valves splitting from the persistent axial cell-wall. Seeds oblong. Stems glabrous. Species native.

(*Eumimulus*.)

Leaves ovate, petioled. Angles of stem slightly winged. Pedicels stout, in fruit 5-10 mm. long. Calyx-lobes setaceous-tipped, 1-2 mm. long. Corolla 35 mm. long. Seeds pale-yellow.

3. *M. alatus*.

Leaves lanceolate, clasping. Angles of stem not winged. Pedicels slender, in fruit 30-60 mm. long. Calyx-lobes lanceolate, 3-5 mm. long. Corolla 30 mm. long. Seeds brownish.

4. *M. ringens*.

1. *MIMULUS MOSCHATUS* Dougl.

Aquatic in running streamlets or in bogs; rare; seen only from Queens and Sullivan counties, New York and Lehigh County,

Pennsylvania. Certainly an escape from cultivation on Long Island, but in the mountain habitats it appears as if native. A native of the Rocky Mountains, occurring eastward in northern Michigan, Newfoundland and northern New England.

2. *MIMULUS GUTTATUS* DC.

Meadows and along streams, rarely escaped from cultivation; seen from Litchfield County, Connecticut, and Delaware County, New York. Native of western North America.

3. *MIMULUS ALATUS* Ait. Hort. Kew. 2: 361. 1789. "Nat. of North America. Introd. 1783, by Mr. William Malcolm."

Flowering from late July to early September, and soon ripening fruit.

Shaded swamps and along streams, in potassic soil, frequent, becoming rare northward, through the area above the Fall-line; occasional in the Middle District of the Coastal Plain of New Jersey. Ranges from Connecticut to Ontario and Kansas, southward to Florida and Louisiana.

4. *MIMULUS RINGENS* L. Sp. Pl. 634. 1753. "Habitat in Virginia, Canada . . . Hort. ups. 176. t. 2." In the Hortus Upsalensis 176, pl. 1, 1748, Linné described and figured our plant.

Flowering from early July to mid-September, and soon ripening fruit.

Open swales and along streams, more rarely in shaded swamps, in potassic and calcareous soils, common throughout the area above the Fall-line, of more rare occurrence through the Middle District and Coast Strip of the Coastal Plain. Ranges from Nova Scotia to Alabama, Minnesota and Kansas.

8. *ILYSANTHES* Raf. Ann. Nat. 13. 1820

Type species, *I. riparia* Raf., of the Ohio valley.

Leaves 1-3 cm. long, obviously attenuate at base. Pedicels relatively stout, at least in fruit, shorter than the bracts. Sepals usually finely pubescent, usually about equaling the capsule.

Leaves lanceolate to ovate-lanceolate, usually only the lowermost obtuse. Fruiting pedicels 5-10 mm. long. Plant diffuse.

1. *I. dubia*.

Leaves elliptic-oval, all obtuse. Fruiting pedicels
3-5 mm. long. Plant erect.

1a. *I. dubia inundata*.

Leaves .5-1.5 cm. long, rounded at base, or at least broadest
much below the middle. Pedicels filiform, longer than
the bracts. Sepals glabrous or nearly so, shorter than
the capsule.

2. *I. inaequalis*.

1. *ILYSANTHES DUBIA* (L.) Barnhart.

Gratiola dubia L. Sp. Pl. 17. 1753. "Habitat in Virginiae
aquosis." Type, *Clayton 164*, identified by Dr. B. L.
Robinson in *Rhodora* 10: 67. 1908, as the species here
considered.

Capraria gratioloides L. Syst. ed. X. 1117. 1759. Based
upon *Gratiola dubia* L.

Ilysanthes gratioloides (L.) Benth. in DC. Prod. 10: 419.
1846.

Lindernia gratioloides (L.) Lloyd & Fouc. Fl. Ouest Fr. ed.
IV. 246. 1886.

Ilysanthes dubia (L.) Barnhart in Bull. Torr. Club 26: 376.
1899.

Flowering from early July to October, and soon ripening
fruit.

Swamps, in potassic soil, frequent above the Fall-line and in
Middle and Cape May Districts of the Coastal Plain. Ranges
from New Brunswick and Ontario to Florida and Texas.

1a. *Ilysanthes dubia inundata* Pennell, var. nov.

Plant erect, 1.5-2 dm. tall. Leaves elliptic-oval, obtuse, 1.5-
2 cm. long. Pedicels in fruit but 3-5 mm. long.

Type, sandy tidal flats of Delaware River above Delair, Cam-
den Co., New Jersey, collected in fruit September 3, 1915,
Pennell 6496; in herbarium New York Botanical Garden.

Tidal flats of Passaic River, New Jersey, of the Delaware
River in New Jersey, Pennsylvania and Delaware. Also seen
from along the Potomac River near Alexandria, Virginia.

2. *Ilysanthes inaequalis* (Walt.) Pennell, comb. nov.

Gratiola inaequalis Walt. Fl. Carol. 61. 1788. Probably
from lower South Carolina, a district where the plant
here considered is frequent. Identified by Michaux,
Fl. Bor. Am. 1: 7. 1803 as questionably his own *Gratiola*

anagallidea, and by Elliott, Sketch Bot. S. C. & Ga. 1: 16. 1816, identified and carefully described under the name *Lindernia dilatata* Muhl. Both the latter specific names are synonyms of this.

Flowering from late June to late September, and soon ripening fruit.

Swamps, in potassic soil, frequent throughout the Coastal Plain excepting the Pine Barrens, and, occasionally extending somewhat above the Fall-line. Ranges from Massachusetts to Florida and Texas.

9. **HEMIANTHUS** Nutt. in Journ. Acad. Nat. Sci. Phila. 1: 119. 1817.

Type species, *H. micranthemoides* Nutt.

1. **Hemianthus micranthus** (Pursh) Pennell, comb. nov.

Herpestis micrantha Pursh, Fl. Am. Sept. 2: 418. 1814.

"On the banks of rivers, at the edge of low water mark: Pennsylvania to Virginia." Described as with five-leaved calyx, but no other plant can possibly be intended.

Hemianthus micranthemoides Nutt. in Journ. Acad. Nat. Sci. Phila. 1: 119. pl. 6. 1817. "Habitat on the gravelly banks of the Delaware, overflowed by the tide, near Kensington [Pennsylvania]." Type seen in the herbarium of the Academy of Natural Sciences.

Micranthemum micranthum (Pursh) Wood, Class-Book 525. 1861.

Micranthemum Nuttallii A. Gray, Man. Bot. N. Un. St. ed. V. 331. 1867. "*Hemianthus micranthemoides* Nutt. . . . Tidal muddy banks of the Delaware River, and southward." Typified by plant of Nuttall.

Micranthemum micranthemoides (Nutt.) Wettst. in Engl. & Prantl, Natur. Pflanzenfam. 4^{3b}: 77. 1891.

Globifera micranthemoides (Nutt.) Kuntze, Rev. Gen. 461. 1891.

Flowering from early September to October, and soon ripening fruit.

Gravelly or sandy river-shores, between high and low tides,

Delaware and Chesapeake drainage. Along the Delaware River in New Jersey, Pennsylvania and Delaware. Also along the Potomac River in Virginia.

10. LINARIA Mill. Gard. Dict. ed. IV. 1754

Type species, *Antirrhinum Linaria* L. of Europe.

Corolla, excluding spur, 15-18 mm. long, yellow; posterior lip arched over anterior; anterior lip forming a conspicuous protruding orange palate; spur tapering from a broad stout base. Capsule 10 mm. long, much exceeding the sepals. Style 8 mm. long. Seeds 1.7 mm. long, flattened and circularly broadly-winged. Stem 3-10 dm. tall, densely leafy; without sterile prostrate branches from the base.

(*Linaria*, sensu strictu.)

1. *L. Linaria*.

Corolla, excluding spur, 7-8 mm. long, blue; posterior lip erect; anterior lip broadly spreading, but not forming a definite raised palate; spur very slender throughout. Capsule 2 mm. long, equaling to slightly exceeding the sepals. Style .8 mm. long. Seeds .3-.4 mm. long, cylindric, prismatic-angled, not winged. Stem very slender, 2-8 dm. tall, less leafy; with sterile prostrate branches from base.

(*Leptoplectron*, sect. nov.)

2. *L. canadensis*.

1. LINARIA LINARIA (L.) Karst.

Linaria pensylvanica Scheele in Flora 26: 586. 1843. "Aus Penvsylvanien." Described as differing from *L. vulgaris* (= *L. Linaria*) by having the raceme axis and pedicels quite smooth instead of glandular-pubescent. *L. Linaria* varies freely between these two states.

Loam or sandy soil, fields and waste ground, common above the Fall-line, less common through the Coastal Plain. Naturalized from Eurasia.

2. LINARIA CANADENSIS (L.) Dum.-Cours.

Antirrhinum canadense L. Sp. Pl. 618. 1753. "Habitat in Virginia, Canada." Specimen in Linnean herbarium credited to Canada should be the type. This is probably a plant collected by Kalm, and as Kalm spent much time near Philadelphia, especially on Raccoon Creek, Gloucester Co., New Jersey, in a district where this plant is very common, his specimen is probably from there. In Kalm's Travels 1: 358. 1770, this species is mentioned as if

common at Raccoon. Moreover it is a plant of rare occurrence and obviously recent introduction in any part of Canada.

Linaria canadensis Dum.-Cours. Bot. Cult. 2: 96. 1802.

"Lieu. Le Canada, la Virginie." Doubtless based upon *Antirrhinum canadense* L.

Flowering from late April to October, and soon ripening fruit.

Open sandy potassic soil, frequently a weed; throughout the Coastal Plain of Long Island and New Jersey, but likely introduced into the Pine Barrens; above the Fall-line occasionally introduced along railroad-tracks. Ranges from Massachusetts to Florida and Texas.*

(To be continued.)

REMINISCENCES OF ORCHID-HUNTING

BY HERBERT M. DENSLow

One who has much to do with orchids garners a store of happy memories. The writer's acquaintance with this fascinating family began in the year 1867 and extends over a period very nearly the same as the life of the Torrey Club. These recollections, however, do not really cover this half century, but are concerned chiefly with about a dozen years at the beginning of it and as many more since the year 1905. The interval was too much occupied with professional duties to leave more than occasional scraps of time for any hobbies. They were not barren years, for they included some fascinating excursions and thrilling discoveries; but they are not so crowded, in retrospect, with memories of orchid-hunting as are the earlier and the later periods.

The earliest picture is of an extensive cranberry bog, long since drained and cultivated, in East Haven, Connecticut, in which on one unforgettable summer day, the novice, who had

* The following plants are to be considered as scarcely established.

CYMBALARIA CYMBALARIA (L.) Wettst., from Eurasia, is occasional along roadsides, and elsewhere near old gardens.

KICKXIA ELATINE (L.) Dumort. and K. SPURIA (L.) Dumort., both from Eurasia, are occasionally seen, mostly on ballast.